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Promised Incentives on a Random Digit Dial Survey

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Abstract: *This paper presents the results of two experiments carried out to test the effectiveness of promised incentives for a random digit dial survey (RDD) at the initial household contact (introduction) and at the stage of refusal conversion. The results of the experiments find no effect of at either stage of the survey process. These results are contrary to those found by at least one other recent experiment, as well as the use of promised incentives used routinely to convert reluctant respondents by several survey organizations. The possible reasons for not finding an effect are discussed.*

Keywords: *prenotification, interviewer effects, telephone survey*

There has been increasing pressure to maintain response rates on random digit dial (RDD) telephone surveys (Massey et al. 1997). With these pressures, it has become more common to use incentives on RDD surveys. Incentives have been found to be effective in increasing response rates for many types of surveys (Church 1993, Singer et al. 1996). However, their utility in an RDD context is unclear. Research outside of an RDD context has shown that promising money (or a gift) is not nearly as effective as providing the incentive at the time of soliciting cooperation. Since there is not generally an opportunity to pre-pay all RDD sample persons, the utility of promised incentives on RDD surveys is unclear.

There has not been a great deal of research on the effectiveness of a promised incentive in the context of an RDD survey. Of the evidence that does exist, the results provide a mixed picture (CMOR 1996, Strouse and Hall 1997). The purpose of this paper is to report results from two experiments testing promised incentives on an RDD survey. One experiment tests promised incentives at the initial call, while the second experiment tests incentives at the refusal conversion stage.

1 Design of the National Survey of America's Families

The experiments were conducted as part of the National Survey for America's Families (NSAF), a RDD survey funded by a consortium of private foundations in the United States. It is being conducted by Westat for the Urban Institute. The purpose of the survey is to assess the impact of recent changes in the administration of a number of assistance programs for children and the poor.

The NSAF consists of both a screening and an extended interview. The screening interview consists of a 3-5 minute battery of questions that is designed to select the person that should be administered the extended interview. This involves determining if there are any persons under 65 years old in the household and whether or not the family is above or below 200% of poverty. If there is someone in the right age-range and the household is sampled (based on poverty status) a respondent for the extended interview is selected. The extended interview is approximately 45 minutes in length and covers a wide range of topics, including health, education, child care, income and receipt of social services.

The experiments discussed below were done at the screening stage of this process. Two important features of this design should be noted. First, because of the sampling algorithms, a majority of those that are called to do the screener are not eligible for the extended interview. They are eliminated either because they do not have any person in the household in the right age range or because they are not below 200% of poverty (approximately half of the households that are above 200% of poverty are sampled). Second, the person that answers the screening instrument is not necessarily selected to do the extended interview. For the sample of families, the extended interview respondent is that person that knows the most about the health and well-being of a randomly selected child (based on rosters compiled during the screener). For the sample of adults, the extended interview is done with a randomly selected adult.

2 Promised incentives at the initial contact

The first experiment was conducted as part of a series of small tests that compared alternative formats and designs of the introduction to the screener. This experiment tested the effectiveness of offering a \$5 incentive.

Design: There were a total of 6 experienced interviewers who participated in this experiment. Telephone numbers from a telephone directory were selected for calling. The areas called were concentrated in low income areas of Michigan, West Virginia, Virginia, Massachusetts, and New Jersey.

The incentive introduction was:

Hello, this is (NAME) and I'm calling for the Urban Institute, a private nonprofit research center that is interested in the well being of adults and families. We are preparing for a study on how changes in health care, education and human services in (STATE) are affecting people like yourself. We are offering \$5 to those persons that are eligible and agree to participate in a telephone interview.

To find out if someone in your household is eligible, I need to ask a few questions about who lives there. These questions will take about 3 minutes.

The offer was targeted to the person who was eligible for the study and who agreed to complete an extended interview.

The "no-incentive" introduction was:

Hello, this is (NAME) and I'm calling for the Urban Institute, a private nonprofit research center that is interested in the well being of adults and families. We are preparing for a study on how changes in health care, education and human services in (STATE) are affecting people like yourself.

The primary outcome measure for the experiments was a "cooperation rate," which consisted of :

$$CR = (\text{Completes} + \text{Ineligibles}) / (\text{Completes} + \text{Ineligibles} + \text{Refusals}).$$

The numerator consists of persons who completed the entire screener because there was an eligible subject in the household and those households where no eligible subjects were found (i.e., household had no persons less than 65 years old). The denominator adds in those persons that refused to provide enough information to determine eligibility. No attempts were made to convert refusals.

Results: As can be seen from the results in Table 1, inclusion of an offer of money actually reduced, rather than increased, the cooperation rate (53.3 vs. 60.6). The difference is marginally significant ($p < .15$ using a two tailed test).

Table 1: Results of promised incentives by stage of offer

	Incentive	No Incentive
At Initial Contact (Incentive of \$5)	53.3 (210)	60.6 (231)
At Refusal Conversion (Incentive of \$25)	27.4 (1,019)	28.5 (1,034)
Advance letter	27.7 (495)	31.1 (486)
No advance letter	27.1 (524)	26.3 (548)
Left message	35.0 (329)	30.3 (277)
Never left message	23.8 (690)	27.9 (757)
Left message and interviewer was:		
Left on conversion	39.0 (197)	30.1 (143)
Not left on conversion	29.1 (134)	30.6 (134)

One issue that became clear during this testing was that many respondents did not stay on the line long enough to hear the incentive offer. Of the 98 persons that refused the incentive offer, 77 individuals hung up either during or shortly after the introduction was read. Slightly over half of these (48) stayed on the line long enough to hear the offer of \$5. The other 29 hung up before the introduction was finished. An additional 11 people hung up either during or right after the first question was read ("Is the person at least 18 years old and a member of the household?"). The speed of refusal was similar to the "no-incentive" introduction - 78 of the 91 persons that refused hung up either during the introduction or at the first questionnaire item.

The interviewers generally did not think the offer of money was an effective way to gain the confidence and cooperation of the respondent. It was felt that the offer of money mixed them in with telemarketing firms that try to trick individuals into staying on the

line and eventually sell them something or take their money. It should be noted, however, that these interviewers did not have any experience offering money in this context, they were highly experienced with doing government surveys that do not offer money.

3 Promised incentives at refusal conversion

A second experiment was conducted that tested the effectiveness of offering \$25 to convert refusals at the screener level.

Design: This experiment was conducted with a total of 25 interviewers during the initial stages of interviewing for the NSAF. The interviewers were initially selected from among the pool of individuals who were asked to work refusal conversion for the study. The sample consisted of a random subsample of those households where someone had refused to complete the screening interview within 6 of the 11 states that were included in the NSAF supplemented state sample (Texas, New Jersey, Massachusetts, California, New York, Florida). The 6 states were selected because they exhibited the lowest response rates in the sample. Half of the 2,323 cases were assigned to an incentive condition and half were assigned to a “no-incentive” condition.

Cases were randomly assigned among the 25 interviewers. These initial cases were worked by the assigned interviewer until there was a callback assigned that crossed the interviewer’s shift (e.g., call during the day, but the interviewer was scheduled for the evening). The average number of cases finalized by an interviewer was 79 (median 83), although there was quite a bit of variation around this average (standard deviation of 30). Several of the 25 interviewers dropped out of the study. Their cases were reassigned to other interviewers.

The interviews were conducted in a room that was isolated from the rest of the interviewing staff. There was some concern that if the experiment were being done in the proximity of normal production work, the offer of incentives would be overheard by other interviewers.

The 25 interviewers were assigned to one of two groups. During the first half of the experiment, one group offered respondents \$25 if they agreed to complete the screening interview. The introduction used for this was:

Hello, my name is (NAME) with the National Survey of America’s Families. We are conducting this study for private foundations interested in education, health care, and other services in (STATE). The study has been endorsed by state governments concerned with how recent changes in policies affect

people's lives. I am not asking for money. To show our appreciation for your help, we will send your household \$25 for participating in the survey.

Interviewers were allowed to deviate from this script in ways that they thought appropriate. During the training, interviewers were instructed to use the monetary incentive at any point in the interview they felt it would have the most impact.

The other group of interviewers began with the "no-incentive" cases, using the introduction:

Hello, my name is (NAME) with the National Survey of America's Families a study to see how recent changes in federal laws affect people's lives in your community. I am not asking for money - this is a study for private foundations on education, health care, and other services in the state of (STATE).

Once half of the cases had been worked, the two groups of interviewers switched conditions. Group 1 worked "no-incentive" cases, while Group 2 worked the "incentive" cases. Switching between conditions was done to minimize any confusion related to erroneously offering money for a no-incentive case.

Before the experiment began, the phone numbers were matched to a list of telephone directories. Those that matched and that had an address were sent a letter prior to the first refusal conversion call. For the cases with an incentive, the letter mentioned that \$25 would be provided if the screener was completed.

Results: The basic results of the experiment are displayed in Table 1. These provide the Refusal Conversion Rates (completes/(refusals + completes)) by the incentive and no-incentive conditions. As can be seen, the offer of \$25 had no effect on the overall rate of conversions, with 27.4% for the incentive condition and 28.5% for the no-incentive condition.

The prevailing hypothesis of why the incentive did not work is that respondents did not believe the offer of money. One way legitimacy of the offer might have been established, was through attempts to prenotify the respondent about the purpose of the call. Prenotification might provide respondents some opportunity to think about the substance of the study and, hopefully, decide that the call was part of a legitimate research effort (Dillman 1978).

There were two forms of prenotification that were used on the study. As mentioned above, letters were sent to those respondents for whom addresses could be found in public telephone directories. This did not increase the effectiveness of the incentive. For those that received an advance letter, the conversion rate for the incentive group was not

statistically different from those in the "no-incentive" group (data not shown).

A second form of prenotification was to leave a message on an answering machine. A message was left which contained information about the incentive the first time an interviewer had the opportunity to do so (no messages were left in subsequent calls). Table 1 displays data that partially supports the hypothesis that this increased the effectiveness of the incentive. In those instances where a message was left, the conversion rate was about 5% higher in the incentive condition ($t=1.28$; $p<.10$, one tailed test). When messages were not left, the opposite was the case ($t=1.78$; $p<.05$; one tailed test).

There are a number of differences between prenotification by the letter and the message machine. One is the difference in the mode of delivery of the message. The letter was mailed using addresses from published telephone lists. These addresses are not up to date. Consequently, some proportion of the letters are not actually delivered to the address to which the telephone number correspond (Traugott et al. 1997). Even if the letter is to the right address, it may never be opened or carefully read by the person who answers the phone. It may be thrown out as "junk" mail before opening or the person to whom it is addressed (and listed in the phone directory) may not be the person that the interviewer talks to. Finally, another set of letters were sent prior to the initial call made to the household when the study began. The letter for refusal conversion may have just been seen as providing more of the same information that had been rejected the first time. Consequently it may not have been taken very seriously or even read at all.

Alternatively, a message left on a machine could be heard by many people in the household. The person that plays the message is forced to listen to it in order to clear the machine. There is also evidence that leaving messages distinguishes calls from those of telemarketers, who generally do not leave messages (Xu et al. 1993, Tuckel and Shukers 1997). Unlike the letter, it provides an alternative method from the original prenotification letter to inform individuals about the study. It may not be seen, therefore, as providing redundant information and may be taken a bit more seriously.

One final difference are the types of respondents each method reaches. The letter only reaches those that have an address listed in the phone book, while the message machine only reaches those persons that have a machine and did not answer the phone when the interviewer first called.

When debriefed, interviewers were evenly split on the utility of the \$25. Some interviewers felt that it provided an effective tool for converting respondents, while others provided the same feedback as in the first experiment - they felt that it made them sound like telemarketers trying to sell the respondent something. There were mixed feelings about when the incentive should be presented. Many interviewers felt that putting the

incentive at the very beginning of the introduction exacerbated problems with sounding like a telemarketer. They felt that it was first important to establish some credibility about the purpose of the call before mentioning the money.

This qualitative information seemed to indicate that effective use of a \$25 incentive may be subject to the skills of the interviewer. Subtle differences in the delivery of the introduction may make a significant difference in whether or not the incentive is effectively used. One way this may have manifested itself would be a condition of the use of incentives and interviewer experience. As noted above, all of the interviewers were trained to do refusal conversion as part of the experiment. If interviewers became more confident and skilled at conversion as the field period progressed (as is normal), then the use of the incentive may have also improved as the field period progressed.

This would have shown up as a difference between interviewers who initially started with the incentive (Group 1) and those that offered it during the second half of the experiment (Group 2). This did not seem to be the case however. The differences in the incentive and no-incentive conditions were essentially the same, regardless of when the interviewers were using the incentive during the experiment (Group 1 vs. Group 2).

Use of the incentives may also be subject to more intrinsic qualities related to skills interviewers bring with them to the job. For example, there is quite a bit of variability across interviewers in their abilities to obtain high cooperation rates (Oksenberg and Cannell 1988, Collins et al. 1988). If these abilities are important for utilizing the \$25 to convert refusers, then one might expect that the effect would vary by interviewer quality. To test this idea, we used two measures of quality, both of which utilized data obtained during NSAF field period. The first measure was the cooperation rate the interviewer achieved during the January to July NSAF field period.¹ These data are not consistent with the above hypothesis. The differences between the incentive and no-incentive conditions are not statistically different across the three groupings of interviewers (top third, middle third and bottom third).

A second way used to measure interviewer skill was to subset interviewers by whether or not they were kept on refusal conversion for the length of the NSAF field period. When looking at only those that were permanently kept on refusal conversion also does not support the hypothesis that better interviewers could more effectively use the incentive.

¹ The experiment was conducted during a 4 week period in March-April of 1997. The NSAF was administering initial screeners for much of 1997.

There is some evidence, however, that skill does interact with prenotification on the effects of incentives. Table 1 provides conversion rates for calls where a message was left by whether or not an interviewer was left on refusal conversion for the entire study. As can be seen, the significant effect of message machines is reduced to zero for those interviewers that were eventually not kept on refusal conversion, while the effect for the best converters is still significant ($t=1.78$; $p<.05$; one tailed test). One should note, of course, that these conclusions are not based on a large number of cases or a large number of interviewers (approximately 25). These conclusions, then, must only be considered tentative and need further confirmation.

4 Summary and conclusions

The experiments reported above did not find an effect of promised incentives for either the initial screening call or during refusal conversion. These results illustrate the relatively complicated role promised incentives may play in the context of an RDD survey. Overall, these results suggest that effective use of incentives varies by: (1) level of payment, (2) prenotification, (3) interviewer skill, and (4) method of presentation.

In conclusion, these data provide no evidence that promised incentives provide a magic bullet in the survey researcher's search for maintaining respectable response rates on RDD surveys. None of the data presented above find a consistent and substantial effect of promised incentives. If there is an effect, these data seem to indicate that it likely varies by a number of factors that are currently not well understood. Before implementing promised incentives on any particular RDD survey, therefore, it would probably be in the interest of both the sponsor and the survey organization to experiment with its use before implementing it on a large scale.

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